

IN THE CLAIMS:

Please cancel claims ~~1-9~~ and ~~25-30~~.

Please amend claims ~~10~~, ~~14~~, ~~16~~, ~~17~~, ~~19~~, ~~20~~ and ~~21~~ as follows

- 1 1. (Canceled) A system for rendering graphics primitives using a shortened display list for  
2 ensuring a shortened processing time while maintaining the quality of the display information  
3 contained in the display list, the system comprising:  
4 a system bus for communicating data and instructions;  
5 a host processor coupled to the system bus for processing a display list defining a  
6 graphics primitive;  
7 a system memory coupled to the system bus for storing the display list;  
8 a graphics subsystem coupled to the system bus for processing display parameter values  
9 contained in the display list, wherein the display list includes a field load  
10 instruction for effectively shortening display list processing; and  
11 a display unit coupled to the graphics processor for displaying the graphics primitives  
12 comprising the display list.
- 1 2. (Canceled) The system of claim 1 further including a frame buffer coupled to the  
2 graphics processor for storing the display list.
- 1 3. (Canceled) The system of claim 1, wherein the graphics subsystem includes a plurality of  
2 storage means for storing the parameter values representative of the graphics primitives in the  
3 display list.

1 4. (Canceled) The system of claim 3, wherein the graphics subsystem further includes a  
2 address generating means for generating address offsets bits responsive to the display parameter  
3 values contained in the display list.

1 5. (Canceled) The system of claim 4, wherein the graphics subsystem further includes an  
2 instruction storing means for storing a plurality of instruction data bits responsive to each of the  
3 plurality of display list instructions, said instruction data bits shortened to allow the display list  
4 to be processed within a shortened processing cycle in the graphics subsystem.

1 6. (Canceled) The system of claim 5, wherein the graphics subsystem further includes an  
2 instruction sequencing means coupled to the instruction bits storage means for sequencing bits of  
3 the display list into a plurality of register files.

1 7. (Canceled) The system of claim 6, wherein the graphics subsystem further includes an  
2 instruction fetch means for randomly fetching a next display list parameter value for a display  
3 primitive to be processed in the graphics subsystem.

1 8. (Canceled) The system of claim 7, wherein the graphics subsystem further includes an  
2 address counting means for sequentially counting the address storage locations for the display list  
3 parameter values of the graphics primitives stored in the plurality of register files.

1 9. (Canceled) The system of claim 8, wherein the graphics subsystem further includes an  
2 address partition storage means for storing addresses responsive to load instructions representing  
3 the shortened display list, and wherein portions of the instruction storing means index the address  
4 partition storage means.

1 10. (Amended) A graphics system for processing parameter values of graphics primitives in  
2 a display list, wherein the display list is shortened to enable fast processing time while  
3 maintaining the quality of information contained in the display list, the graphics system  
4 comprising:

5 a plurality of register files for storing a plurality of parameter values representing  
6 graphics primitives defined in the display list; and

7 a graphics processor coupled to the plurality of register files, wherein the graphics  
8 processor processes the shortened display list while maintaining the display  
9 quality of primitives displayed in a display unit, the graphics processor processing  
10 load instructions representative of a shortened display list instruction including  
11 the fetching of parameters associated with the shortened display list instruction  
12 and storing fetched parameters randomly in the plurality of register files.

1 11. (Unchanged) The graphics processor of claim 10 including an instruction fetch logic unit  
2 for fetching the next parameter values responsive to a graphics primitive to be displayed.

1 12. (Unchanged) The graphics processor of claim 11 further including a load instruction unit  
2 for storing load instructions representative of a shortened display list instruction, said load  
3 instruction comprising a plurality of data bits each of said plurality of data bits representing  
4 specific load functions to be performed by the load instruction.

1 13. (Unchanged) The graphics processor of claim 12, wherein the load instruction unit  
2 includes an opcode storage unit for storing opcode information responsive to each of the load

3 instructions for determining the type of function to be performed by the graphics primitive to be  
4 rendered.

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1 14. (Amended) The graphics processor of claim 13, wherein the load instruction unit further  
2 includes a write enable storage portion for storing write enable data for determining whether to  
3 load one of the plurality of [registers in the] register files.

1 15. (Unchanged) The graphics processor of claim 14, wherein the load instruction unit  
2 further includes an instruction partition portion for storing partition data for referencing the  
3 partition table to load parameter values to the referenced register.

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1 16. (Amended) The graphics processor of claim [10] 12 further comprising a data shifter  
2 coupled to the load instruction unit for sequentially shifting data bits corresponding to a load  
3 instruction in order to write the load instructions to the register files.

1 17. (Amended) The graphics processor of claim 16 further comprising an address counter  
2 coupled to the register files for sequentially counting [the] address offsets of the register files  
3 locations as the load instruction data is loaded into the register files.

1 18. (Unchanged) The graphics processor of claim 17 further comprising a partition table  
2 coupled to the load instruction unit for storing the address offset bits corresponding to random  
3 register locations in the register files for the display parameter values in the display list.

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1 19. (Amended) The graphics processor of claim 18 further comprising a write enable signal  
2 coupled to [the] an address bit shifter, said write enable signal asserted high to allow the graphics

3 processor to write the load instructions to the register files, wherein the write enable signal  
4 enables the graphics processor to randomly load register locations in the register file.

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1 20. (Unchanged) The graphics processor of claim 19 further comprising a request next  
2 parameter value signal coupled to the fetch logic unit, said request next parameter signal asserted  
3 high to allow the next parameter value in the display list to be fetched by the graphics processor.

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1 21. (Amended) The graphics processor of claim 20 wherein the partition [look-up] table  
2 comprises 64 entries of address offsets to the register file.

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1 22. (Unchanged) The graphics processor of claim 21 wherein the 64 entries of the partition  
2 table are evenly distributed to corresponding register locations in the register file.

1 23. (Unchanged) The graphics processor of claim 22 wherein each of the 64 entries of the  
2 partition table is 6 binary wide.

1 24. (Unchanged) The graphics processor of claim 23 wherein the register file comprises  
2 1024 entries of addresses.

1 25. (Canceled) A method of encoding and decoding a shortened display list load instruction  
2 comprising the steps of:

3 encoding a field load instruction wherein the field load instruction comprises an opcode

4 instruction, a write enable field and a partition index field;

5 loading the field load instruction to a register file; and

6 executing the field load instruction in a shortened processing time.

1 26. (Canceled) The method of claim 25 wherein the field load instruction execution step  
2 comprises the step of enabling the write enable field to allow the load instruction to be randomly  
3 load to the register file.

1 27. (Canceled) The method of claim 25 wherein the loading step comprises the step of  
2 loading a shift register with write enable data from the field load instruction.

1 28. (Canceled) The method of claim 27 wherein the instruction loading step further  
2 comprises the step of indexing a partition look-up table with write enable data from the write  
3 enable field.

1 29. (Canceled) The method of claim 27 wherein the instruction loading step further includes  
2 loading an address counter to sequentially count the number of load instructions in the display  
3 list.

1 30. (Canceled) The method of claim 29 wherein the write enable field is disabled to skip the  
2 loading of a register in the register file.